

**DECISION  
AND  
FINDING OF NO SIGNIFICANT IMPACT  
FOR THE ENVIRONMENTAL ASSESSMENT:  
“REDUCING MAMMAL DAMAGE IN THE STATE OF IOWA”**

**I. INTRODUCTION and BACKGROUND**

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program receives and responds to requests for assistance from individuals, organizations and agencies experiencing damage and other problems related to wildlife. Wildlife damage management is the alleviation of damage or other problems caused by or related to the presence of wildlife, and it is recognized as an integral part of wildlife management (The Wildlife Society 1992). In November 2006, WS released an Environmental Assessment (EA) entitled “*Reducing Mammal Damage in the State of Iowa*” to facilitate planning, interagency coordination, streamline program management, and to clearly communicate to the public the analysis of WS’ proposed adaptive integrated mammal damage management (MDM) program. Ordinarily individual WS damage management actions are categorically excluded and do not require an EA (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). However, to facilitate good planning and communication and to disclose the analysis of impacts, an EA was prepared. The EA documented the need for adaptive integrated MDM in Iowa and assessed potential impacts of various alternatives<sup>1</sup> to reduce risks to human health and safety and respond to other damage associated with mammal activities. WS also consulted with the U.S. Fish and Wildlife Service (USFWS), Iowa Department of Natural Resources (IDNR), Iowa Department of Agriculture and Land Stewardship (IDALS), Iowa Department of Public Health (IDPH), and Federal Aviation Administration (FAA) to help determine any impacts to State wildlife populations and resources, and to ensure that the proposed action is in compliance with relevant laws, regulations, policies, orders and procedures, including the Endangered Species Act (ESA) of 1973. The EA and supporting documentation<sup>2</sup> are available for review at the USDA-APHIS-WS State Office, 1714 Commerce Court, Suite C, Columbia, MO 65202.

The determination for action is the need to reduce risks to public health and safety and damage to agriculture, natural resources, and property from badgers (*Taxidea taxus*), beaver (*Castor canadensis*), black-tailed jackrabbits (*Lepus californicus*), bobcats (*Lynx rufus*), coyotes (*Canis latrans*), eastern cotton-tails (*Sylvilagus floridanus*), eastern moles (*Scalopus aquaticus*), Franklin’s ground squirrels (*Spermophilus franklinii*), ground hogs (*Marmota monax*), mink (*Mustela vison*), muskrats (*Ondatra zibethica*), opossums (*Didelphis virginianus*), plains pocket gophers (*Geomys bursarius*), raccoons (*Procyon lotor*), red fox (*Vulpes fulva*), river otter (*Lutra canadensis*), striped skunks (*Mephitis mephitis*), white-tailed deer (*Odocoileus virginianus*), feral pigs (*Sus scrofa*), feral cats (*Felis catus*), and feral dogs (*Canis familiaris*) in Iowa. Some of the types of mammal damage that resource owners/managers seek to alleviate are: 1) hazards to aviation at airports, 2) human health and safety threats (i.e., aircraft strikes, disease risk), 3) property damage from burrowing or digging, 4) crop damage, 5) disease transmission threats to livestock, and 6)

<sup>1</sup> WS cannot change the IDNR permitting private landowner’s to reduce mammal damage. Therefore, an overarching factor to analyze potential environmental impacts of WS’ MDM is the fact that such management can be conducted by State or local governments, or private entities that are not subject to compliance with NEPA if WS is not involved. Thus, WS has limited ability to affect the environmental *status quo*, except that WS is likely to have lower risks to nontarget species and fewer impacts on wildlife populations than some resource owners/managers. Despite this limitation, the EA is valuable to inform the public of environmental issues, and methods for reducing mammal damage.

<sup>2</sup> The EA incorporates by reference information in the WS programmatic Environmental Impact Statement (EIS) (USDA 1997). Copies of the EIS are available from the USDA/APHIS/WS, Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737-1234.

threats to threatened or endangered (T/E) species and/or their habitats. Details on the conflicts and benefits associated with mammals in Iowa are provided in the EA.

## II. AGENCY AUTHORITIES

Under various acts of Congress, an Executive Order (EO) from President Clinton, and the Code of Federal Regulations (CFR), WS, as requested, is authorized and directed to carry out damage management programs necessary to protect the nation's agricultural and other resources. Among these are the Act of March 2, 1931 (46 Stat. 1468-69, 7 U.S.C. ●426-426b, as amended), Public Law No. 100-202, (●101(k), 101 Stat. 1329-331, 7 U.S.C. ●426c), and EO 13112.

- Under the Act of March 2, 1931 and Public Law No. 100-202, the Secretary of Agriculture may carry out damage management programs alone, or may enter into cooperative agreements with States, local jurisdictions, individuals and public and private agencies whereby they may fund and assist in carrying out such programs. The Secretary has delegated this authority to APHIS; within APHIS the authority resides with the WS program.
- EO 13112 establishes guidance to federal agencies to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health impacts that invasive species cause. To comply with EO 13112, WS may cooperate with other federal, state, or local agencies, or with industry or private individuals to reduce damage to the environment or threats to human health and safety.

The authority for the IDNR to manage Iowa's wildlife is established in Iowa Code (§§455A.2) which, in part states, the "department of natural resources is created, which has the primary responsibility for state parks and forests, protecting the environment, and managing energy, fish, wildlife, and land and water resources in this state." The mission of the Fish and Wildlife Division of the IDNR is to ensure adequate protection, scientific management, and appropriate use of Iowa's fish and wildlife natural resources, while providing a wide range of outdoor recreational opportunities for Iowans.

The IDALS is charged, with the suppression and prevention of infectious and contagious diseases among animals within Iowa (Iowa Code Chapter 163). The IDALS is also charged with the regulation of animals in the pet industry including the transportation of animals, the sale of the animals, and only permitting the sale of animals which appear to be free from infectious or communicable diseases (Iowa Code Chapter 162).

The IDPH is the State agency authorized to: 1) prevent epidemics and the spread of disease, 2) protect against environmental hazards, 3) prevent injuries, 4) promote and encourage healthy behaviors and mental health, 5) prepare for and respond to public health emergencies and assist communities in recovery from emergencies, and 6) assure the quality and accessibility of health services to Iowan. Activities, products, and services of the IDPH include public health planning and communications, intervention and treatment services, prevention services, assessment, surveillance, and epidemiology, policy development, systems development, and medical services (Iowa Code Chapters 135, 136A, 136B, 136C, 139A, 141A, 144, 147A, and 272C; Iowa Code §164.512, §164.501).

The FAA is the federal agency responsible for developing and enforcing air transportation safety regulations and is authorized to reduce wildlife hazards at commercial and non-commercial airports<sup>3</sup>. Many of these regulations are codified in the Federal Aviation Regulations (FAR). The FAA is responsible for setting and enforcing the FARs and policies to enhance public safety. For commercial airports, 14CFR, Part 139.337

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<sup>3</sup> The FAA is empowered to issue airport operation certificates to airports serving air carriers, and to establish minimum safety standards for the operation of airports. Some of these regulations and policies directly involve the management of wildlife and wildlife hazards on and/or near airports (FAR 139.337).

(Wildlife Hazard Management) directs the airport sponsor to conduct a wildlife hazard assessment if an air carrier aircraft experiences multiple wildlife strikes or an air carrier aircraft experiences substantial damage from striking wildlife. At non-commercial airports, the FAA also expects that the airport be aware of wildlife hazards in and around their airport and take corrective action if warranted; the FAA uses Advisory Circular 150/5200-33 to guide their decision making process.

WS is a cooperatively-funded, service-oriented program that only responds to requests from public and private entities to protect resources after an Agreement for Control or other comparable document is signed by the property owner/administrator (WS Directives 3.101 and 3.110). WS would assist the IDNR, IDALS, IDPH and FAA if requested to resolve a human-wildlife conflict if requested and a need is established.

### **III. ISSUES ANALYZED IN THE EA**

The following issues were identified as important to the scope of the analysis (40 CFR 1508.25) and each of the alternatives was evaluated relative to its impacts on these issues.

- Effects on target mammal species
- Effects on other wildlife species, including T&E species
- Effects on human health and safety
- Impacts to stakeholders, including aesthetics
- Humaneness and animal welfare concerns of methods used

An additional four issues were considered but were not analyzed in detail in the EA:

- No Wildlife Damage Management at Taxpayer Expense; Wildlife Damage Management should be Fee Based
- Mammal Damage Should be Managed by Private Nuisance Wildlife Control Agents
- Appropriateness of Preparing an EA (Instead of an EIS) for Such a Large Area
- Effectiveness of Mammal Damage Management Methods

### **IV. ALTERNATIVES ANALYZED IN DETAIL**

The following alternatives were developed to analyzed and respond to the issues “analyzed in detail.” An analysis of the effects of each Alternative on the issues discussed in the EA. All Iowa WS management actions comply with appropriate federal, state, and local laws, and Appendix C of the EA provides a description of the methods that could be used or recommended by WS.

#### **Alternative 1: Technical Assistance Only**

This alternative would not allow for WS’ operational MDM in Iowa. WS would only provide technical assistance and make recommendations when requested. Producers, property owners, agency personnel, corporations, or others could conduct mammal damage management using any legal lethal or non-lethal method available to them.

#### **Alternative 2: Adaptive Integrated Mammal Damage Management Program (Proposed Action/No Action<sup>4</sup>)**

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<sup>4</sup> The No Action alternative is a procedural NEPA requirement (40 CFR 1502.14(d)) and is a viable and reasonable alternative that could be selected and serves as a baseline for comparison with the other alternatives. The No Action alternative, as defined here, is consistent with guidance from the Council on Environmental Quality (CEQ) (1981). In this guidance, the No Action alternative, for situations where there is an ongoing management program, may be interpreted as “no change” from current management direction.

WS proposes to continue the current MDM program in Iowa. WS involvement in MDM in Iowa is closely coordinated with the IDNR and FAA, and WS' take of mammals is authorized through permits and/or other authorities granted by IDNR. An adaptive IWDM approach would be implemented to reduce mammal damage to property, agricultural and natural resources, to reduce mammal impacts on human/public health and safety, and disease monitoring. Damage management would be conducted on public and private property in Iowa when the resource owner (property owner) or manager requests assistance. The adaptive integrated MDM strategy would encompass the use and recommendation of practical and effective methods to prevent or reduce damage while minimizing harmful effects of damage management measures on humans, target and non-target species, and the environment. Under this action, WS could provide technical assistance and direct operational damage management, including nonlethal and lethal management methods by applying the WS Decision Model (Slate et al. 1992). When appropriate non-lethal techniques like physical exclusion, habitat modification or harassment would be recommended and utilized to reduce damage. In other situations, mammals would be removed as humanely as possible using shooting, trapping, and registered pesticides and other products. In determining the damage management strategy, preference would be given to practical and effective non-lethal methods. However, non-lethal methods may not always be applied as a first response to each damage problem (*i.e.*, human health and safety situations or where nonlethal methods have failed to protect resources in the past). The most appropriate response could often be a combination of non-lethal and lethal methods, or could include instances where application of lethal methods alone would be the most appropriate strategy.

### **Alternative 3: Non-lethal Mammal Damage Management Only by WS**

This alternative would require WS to only use and recommend non-lethal methods to resolve mammal damage problems. Information on lethal MDM methods would still be available to producers and property owners through other sources such as IDNR, USDA Agricultural Extension Service offices, universities, or pest control organizations; requests for information regarding lethal management approaches would be referred to these entities. Individuals might choose to implement WS non-lethal recommendations, implement lethal methods or other methods not recommended by WS, contract for WS direct assistance with nonlethal MDM, use contractual services of private businesses, or take no action. Persons receiving WS' non-lethal technical and direct operational assistance could still resort to lethal methods that were available to them. Although WS personnel experienced in MDM generally know when and where nonlethal methods would work, this alternative would often result in the use of methods that are known to be ineffective in particular situations. This would likely increase the costs of MDM efforts and would also allow unacceptable levels of damage to continue until the requirements of this alternative would be met.

### **Alternative 4: No Federal WS Mammal Damage Management**

This alternative would eliminate WS involvement in MDM in Iowa. WS would not provide direct operational or technical assistance and requesters of WS' assistance would have to conduct their own management actions without WS input. Information on MDM methods would still be available through other sources such as IDNR, USDA Agricultural Extension Service offices, universities, or pest control organizations; requests for information would be referred to these entities. Individuals might choose to conduct their own damage management, use contractual services of private businesses, or take no action. This alternative would place the immediate burden for operational damage management work on property owners/managers and other federal, state or county agencies. This would likely result in increased take of nontarget species by persons with less experience.

## **V. MONITORING**

The Iowa WS program will monitor its actions relative to each issue analyzed in detail in the EA. This evaluation will include annual reporting to the IDNR, IDALS, IDPH and FAA, as appropriate, the WS take

of all target and nontarget species to help ensure no adverse impact on the viability of any target or non-target species, including T&E species and any incident of public safety. IDNR and IDPH expertise will be used to determine adverse impacts.

## **VI. PUBLIC INVOLVEMENT**

As part of this process, and as required by the CEQ and APHIS-NEPA implementing regulations, issues related to the proposed action were initially developed by WS and reviewed and refined by the cooperating agencies. As part of WS' environmental analysis process, and as required by CEQ (1981) and APHIS-NEPA implementing regulations, this document was made available to the public through "Notices of Availability" (NOA) published in local media and through direct mailings of NOA to parties that have specifically requested to be notified. An announcement of the availability of the EA for public review and comment was published in one newspaper in Iowa and through direct mailings to parties that had requested to be notified. Twenty-nine letters were mailed to organizations, individuals, and public agencies announcing that the EA was available. WS received two requests for a copy of the EA for review. Following the 30 day public review and comment period, WS received one comment letter on the EA from an individual not located in the state representing an organization. This letter was reviewed for substantive and relevant comments. Most concerns were already addressed in the EA or outside the scope of the analysis, but some of the comments warranted additional clarification or treatment. These comments and the WS response are described in Appendix A of this Decision document.

## **VII. DECISION and RATIONALE**

I have carefully reviewed the EA and the input resulting from the EA review process. I believe the issues identified in the EA are best addressed by selecting Alternative 2, continue the current "*Adaptive Integrated Mammal Damage Management Program (Proposed Action/No Action)*" and applying the associated standard operating procedures and monitoring measures discussed in Chapter 3 of the EA. Alternative 2 provides: 1) the best range of practical and effective damage management methods, 2) has low impacts on target and non-target species, 3) provides safeguards for public safety, 4) allows WS to meet its obligations to the IDNR, other cooperating agencies and counties and residents of Iowa, 5) addresses the issues, and 6) allows for WS' congressionally directed role to protect the Nation's agricultural and other resources. Alternative 2 also provides a mix of technical and operational assistance, and non-lethal and lethal methods. While Alternative 2 does not require non-lethal methods to be used in every situation, WS will continue to consider the use of nonlethal methods and provide information, and encourage the use of practical and effective non-lethal methods, when appropriate (WS Directive 2.101<sup>5</sup>). As a part of this Decision, the Iowa WS program will provide information to requesters on biological and non-lethal management techniques that could reduce damage. I have also adopted the EA as final because comments from the public did not change the analysis.

### **FINDING OF NO SIGNIFICANT IMPACT**

The EA indicates that there will not be significant impacts, individually or cumulatively, on the quality of the human environment because of the proposed action, and that these actions do not constitute a major federal action. I agree with this conclusion and therefore determine that an EIS will not be necessary or prepared. This determination is based on the following factors:

1. Mammal damage management, as conducted in Iowa is not regional or national in scope.

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<sup>5</sup> WS Policy Manual provides guidance for WS personnel to conduct wildlife damage management through Program Directives. WS Directives referenced in this Decision document can be found at <http://www.aphis.usda.gov/ws/wsdirectives.html>.

2. The proposed action will not have an impact on unique characteristics of the areas such as historical or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecological critical areas.
3. The proposed action will not significantly affect public health and safety.
4. The effects on the quality of the human environment are not highly controversial. Although there is opposition to government-sponsored damage management, this action in Iowa is not controversial in relation to size, nature or effects.
5. Standard operating procedures adopted as part of the proposed action lessen risks to the public and prevent adverse effects on the human environment and reduce uncertainty and risks.
6. The proposed action does not establish precedence for future actions with significant effects. This action would not set precedent for additional WS damage management that may be implemented or planned in Iowa.
7. The number of animals taken (both target and non-target) annually would be very small in comparison to total populations. Adverse effects on wildlife or wildlife habitats would be minimal.
8. Mammal damage management would not affect cultural or historic resources. The proposed action does not affect districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places, nor would it cause a loss or destruction of significant scientific, cultural, or historical resources.
9. An evaluation of the proposed action and its effects on State and federally listed T&E species determined that no significant adverse effects would be created for these species. The proposed action complies fully with the Endangered Species Act of 1973, as amended. Consultations with the USFWS and the IDNR regarding potential risks to T&E species have been conducted and these agencies' input was used to develop standard operating procedures for the proposed action.
10. This action would be in compliance with federal, State and local laws or requirements for damage management and environmental protection.
11. No significant cumulative effects were identified by this assessment or other actions implemented or planned within the area.

For additional information regarding this decision, please contact R. Edwin Hartin, State Director, APHIS-WS, 1714 Commerce Court, Suite C, Columbia, MO 65202 or by phone @ 573-449-3033.



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2/21/07  
Date

## APPENDIX A - RESPONSE TO/CLARIFICATION OF COMMENTS

This Appendix contains issues raised in the only letter received by WS during the public comment period for this EA and WS' responses.

### 1. The use of The Wildlife Society (TWS) as the Professional Standard in the Treatment of Wildlife.

WS recognizes that there are many professional societies that have memberships of prominent wildlife professionals; many of which WS personnel belong. We, however, take exception to your comment about WS "glorifying" TWS as the premier wildlife conservation and management organization. TWS, is a premier professional wildlife organization that recognizes the fact the some wildlife cause conflicts with humans<sup>6</sup> and they have addressed that need in the most professional manner to date. TWS publishes two well known and respected journals (*i. e.*, *The Journal of Wildlife Management* and *The Wildlife Society Bulletin*) that not only deal with wildlife management and conservation but also wildlife damage management. TWS has also established a "Wildlife Damage Management Working Group" to better understanding of the challenges of managing human-wildlife conflicts and to provide a forum to advance the skills and knowledge of wildlife damage management practices. The Working Group provides a networking and communication opportunity for wildlife professionals working in management, research, education, and administration on wildlife damage management concerns. The mission of the Wildlife Damage Management Working Group is to: 1) enhance understanding within the profession and various stakeholder groups of the need for responsible wildlife damage management activities, 2) facilitate information transfer to wildlife management professionals and various publics, 3) serve as a professional catalyst, clearinghouse, and conduit for wildlife damage management information, 4) assist TWS Council and resource management agencies with wildlife damage management policy formulation, analysis, and decision making, and 5) promote development of new technologies and maintenance of existing cost-effective management tools. TWS Wildlife Damage Management Working Group also maintains a website for interested parties to obtain information related to wildlife damage and damage management with numerous techniques and products to resolve wildlife damage problems.

### 2. Purpose and Need

WS is a cooperatively-funded, service-oriented program that only responds to requests for assistance to protect resources for public and private entities after an Agreement for Control or other comparable document is signed by the property owner/administrator (WS Directives 3.101 and 3.110) and a need is established. Congress provided authority to the USDA Secretary to protect American agricultural and other resources and interests from damage and to cooperate with private and public entities to resolve damage. The original and primary statutory authority for the WS program is the Act of March 2, 1931, as amended (46 Stat. 1468; 7 U.S.C. 426-426c).

Further, Executive Order (EO) 13112, authorized by former President Clinton, established guidance to federal agencies to prevent the introduction of invasive species and provides for their control and to minimize the economic, ecological, and human health impacts that invasive species cause. To comply with EO 13112, WS may cooperate with other federal, state, or local agencies, or with industry or private individuals to reduce damage to the environment or threats to human health and safety.

WS only responds when damage or threats to resources are occurring and our activities are often contingent upon funding from those requesting WS' assistance, or upon funding from Congress. Before this EA was

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<sup>6</sup> TWS is an international, nonprofit, scientific and educational organization comprised of professionals serving the resource management fields, especially wildlife ecology and management. The objectives of TWS are to: 1) develop and promote responsible stewardship of wildlife resources and the environments upon which wildlife and humans depend, 2) undertake an active role in preventing human-induced environmental degradation, 3) increase awareness and appreciation of wildlife values, and 4) seek the highest standards of professionalism in all activities.

released for public review it was reviewed by the cooperating agencies, and these agencies concurred with WS's proposed action and its effects.

### 3. Humaneness of Techniques Proposed.

Animal restraint is a strictly, law-enforced activity regulated by the IDNR<sup>7</sup> and is an important way for biologists to collect information about wildlife, including information about diseases like rabies that can affect people (<http://www.fishwildlife.org/furbearer.html>). The Association of Fish and Wildlife Agencies began a program to develop Best Management Practices<sup>8</sup> (BMPs) for regulated public trapping to assess animal welfare, identify efficient and selective trapping tools and techniques, document improvements in the welfare of captured animals, and develop recommendations<sup>9</sup> for state wildlife agencies to consider for furbearer management programs ([http://www.fishwildlife.org/furbearer\\_bmp.html](http://www.fishwildlife.org/furbearer_bmp.html)). Based on sound-science and research, program participants are working together to develop, modernize and improve the technology of trapping through scientific research and create practical and more humane wildlife capture applications to field situations.

As described above, WS takes the issue of humaneness of methods seriously and continues to evaluate existing and new methods for animal welfare and humaneness concerns<sup>10, 11</sup> (WS Directive 2.450). Unlike regulated sport trapping, WS' wildlife restraint in Iowa and across the nation is a damage management action<sup>12</sup> conducted with trained WS Specialist or Biologists and only conducted on few and specific species that are generally abundant or overly-abundant and which are causing unacceptable damage or risks of damage. At times management decision-making processes involves considerations between resource protection (*i.e.*, human health and safety) and humaneness, and people may perceive the humaneness of an action differently depending on their background, culture, and how they value the various resources<sup>13</sup> (Proulx and Barrett 1991).

WS recognizes that animal welfare organizations are concerned that some methods used to reduce damage may expose animals to pain and suffering. However, WS also recognizes another side to this issue, as perceived by resource managers, property owners and others. WS believes that humaneness of an action or management plan must not only consider the effects of the action on the target species but also on the people or other species that may be or are affected by the target species. Ideally, such protection would be achieved through non-lethal means, but when non-lethal means are not practical or effective, lethal means may be the only way to accomplish such protection. Some of the standard operating procedures used by WS to reduce nontarget take and increase humanness are: 1) all WS leg-hold traps must incorporate pan-tension devices, if appropriate, to prevent or reduce the capture of smaller nontarget animals, 2) break-away locks or stops are used on snares to allow for the release of livestock, deer, or other animals which may be captured, 3) replacement capture devices are selected from the commercially available devices or equivalents listed in BMP guidelines, unless specifically authorized by the WS Regional Director, and 4) all employees, as appropriate, participate in a trapper education course as recommended by BMP guidelines. We believe that

<sup>7</sup> The IDNR is staffed by professional wildlife biologists and conservation officers that are familiar with Iowa trapping regulations and public concerns about animal welfare.

<sup>8</sup> BMPs are carefully researched recommendations designed to address animal welfare and increase trappers' efficiency and selectivity. The extensive research and field-testing have been used to develop BMPs and methods evaluations used to develop BMPs have been standardized. BMPs are the product of on-going work that is updated as additional traps are identified through future scientific testing. BMPs will ensure the continued improvement of this management technique.

<sup>9</sup> Insofar as practical, WS intends to utilize BPM guidelines as a basis for policy formulation, recognizing that some devices used in wildlife damage management are not commercially available and not all devices recommended in the BMP guidelines for general public use meet the performance requirements, particularly for efficiency and durability, for use in federal wildlife management activities.

<sup>10</sup> Humaneness is also addressed in the EA at Sections 2.3.5 and 4.2.5.

<sup>11</sup> WS' National Wildlife Research Center (NWRC) is mandated by Congress to devote 50% of its base funding toward nonlethal methods development. The NWRC actually spent about 80% out of an annual appropriation of \$17M toward nonlethal methods development in FY06 (L. Clark, NWRC, pers. comm. 2007).

<sup>12</sup> Iowa state law requires that traps and other trapping equipment set in the field be checked at least every 24 hours.

<sup>13</sup> The basic problem associated with animal traps is a lack of defining "humaneness" as it relates to animal cruelty (Proulx and Barrett 1991). The definition of humaneness varies between people and cultures.

if an animal death must occur, it should occur with minimum distress and pain, in as short a period of time as practical, and with compassion.

One of the challenges in coping with this issue, however, is how to achieve the least amount of suffering<sup>14</sup> within the constraints imposed by current technology and funding. Resource managers and the public would both be better served to recognize the complexity of defining suffering and pain since "... neither medical or veterinary curricula explicitly address suffering or its relief" (CDFG 1999). The CDFG (1999) discussed these issues in their Furbearing and Nongame Mammal Hunting and Trapping document. The document discussed welfare of individual animals, including the effects of various methods of "take" on pain and suffering<sup>15</sup>. CDFG (1999) stated that even cage traps are not perfect. Swanstrom (1962) and Swift (1966 as cited in CDFG 1999) reported that some animals captured in cage traps damage their teeth after being captured or when disturbed, and often suffer lacerations on their face and nose because of "fighting" the trap. Further, Roswell et al. (1980) reported that studies indicated that the clamping effect and use of snares was capable of producing rapid unconsciousness and death by hypoxia in cats and could be considered humane. Therefore, each method and situation must be considered on a case-by-case basis.

Proulx (1999) reported on state of the art trap technology on the basis of the most stringent animal welfare performance criteria. However, Proulx (1999) did not consider human safety. Body-gripping traps (*i.e.*, 330 conibear size traps) modified with clamping bars, as recommended by Proulx (1999), strike with 20% more force than a standard 330 conibear trap. However, since people using the conibear trap occasionally catch their hands, the full force of the trap would strike the hand and most likely cause injury. We consider this modification, while possibly more beneficial for animal welfare considerations, a detriment to human safety. While WS is willing to use kill traps that more quickly kill animals, we are unwilling to put our employees or the public at risk for potential injury.

Concerning the use of only non-lethal/displacement methods. What if damage occurs in spite of the use of non-lethal methods? WS is trying to achieve a "balance" between the needs of people, recognizing that people are part of the environment, and keeping issues like protection of the environment, economics, humaneness, etc. in perspective. Questions like, "Is it more humane and ethical to allow nonnative predators to maim and kill thousands of native species annually<sup>16</sup> than to reduce the suffering endured by those species?" need to be asked and answered (Jessup 2004). Non-lethal/displacement methods research suggests that most animals adjust and habituate to these methods (Conover 2002). Despite extensive research, the efficacy of most deterrent techniques remains unproven or inconsistent (Conover 2002). Further, success of a displacement management depends on where the target species relocate or how their behavior<sup>17</sup> is modified because the target species may also cause a problem at a new location or with a new behavior.

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<sup>14</sup> Wild animals are not only killed by cats but are also maimed, mauled, dismembered, ripped apart, and gutted while still alive, and if they survive the encounter, they often die of sepsis because of the virulent nature of the oral flora of cats (Jessup 2004).

<sup>15</sup> Langford (2006) has little relevance to the expected effects from the proposed action, since that study dealt with caged mice held in close associations with each other and how the test mice reactions reflect human pain. That situation is a totally different circumstance than what would be expected to result from the limited predator removal associated with the proposed action. Even Langford states that, "No observation effects whatsoever were observed among strangers" which is the case when MDM actions are conducted by WS in Iowa.

<sup>16</sup> Scientists estimate that nationwide cats kill hundreds of millions of birds and more than a billion small mammals each year, and this predation cannot be ignored (Winter 2004, Jessup 2004). For additional information on cat predation, see the EA at Section 1.3.5.

<sup>17</sup> Feral cats could be cage trapped (live trapped) and provided to county or local animal shelters for adoption, depend upon the situation and relevant ordinances. Because of the huge number of feral cats and the severe shortage of good homes and the difficulty of socialization, it is often necessary and the most compassionate choice to euthanize feral cats (JAVMA 2004). Therefore, relocating and holding feral cats that will ultimately be euthanized add unnecessary stress to those cats and could be considered less humane than immediate lethal control (Levy and Crawford 2004).

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